



1/4

PAGETABLESETUP:

PHYSICAL ADDRESS \leftarrow a

TOTAL ID MAPPED REGION SIZE \leftarrow 4MB

X \leftarrow START ADDRESS OF ID MAPPED SPACE

FOR i \leftarrow 0 TO i \leftarrow NUMBER OF PAGES //SIZE DETERMINES TOTAL
NUMBER OF IDENTITY MAPPED
PAGES RESERVED//

IF PHYSICAL ADDRESS \geq X AND PHYSICAL ADDRESS \leq X + SIZE
THEN VIRTUAL ADDRESS = X //SPECIAL CASE TO HANDLE
IDENTITY MAPPED SPACE//

ELSE

VIRTUAL ADDRESS = f(X) //ASSUMING f(X) IS THE
MAPPING FUNCTION USED
UNDER NORMAL
CIRCUMSTANCES//

NEXT i

//REGULAR PAGE TABLE SETUP CONTINUES//

IMMALLOC(SIZE):

OUTCOME \leftarrow MALLOC (X,X + TOTAL ID MAPPED REGION SIZE,
ALLOCATESIZE)

IF OUTCOME = FAILURE THEN
TRY TO GROW ID MAPPED SPACE DEPENDING UPON MAXIMUM
ALLOWABLE LIMIT

IF NOT ABLE TO GROW THE SPACE
OUTCOME \leftarrow NULL

ELSE

OUTCOME \leftarrow MALLOC(X,X+NEW TOTAL ID MAPPED REGION
SIZE, ALLOCATESIZE)

RETURN (OUTCOME)

Fig. 1

2/4

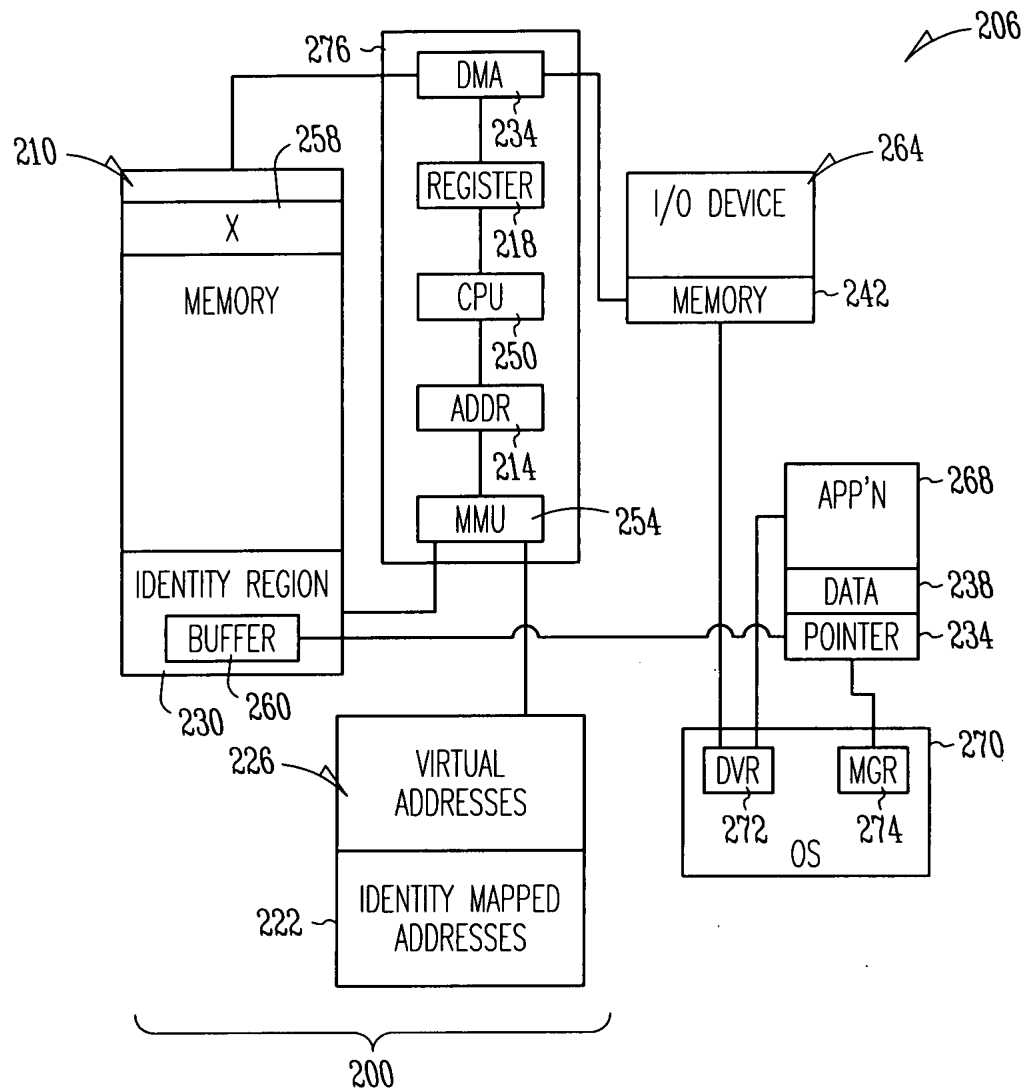


Fig. 2

3/4

311

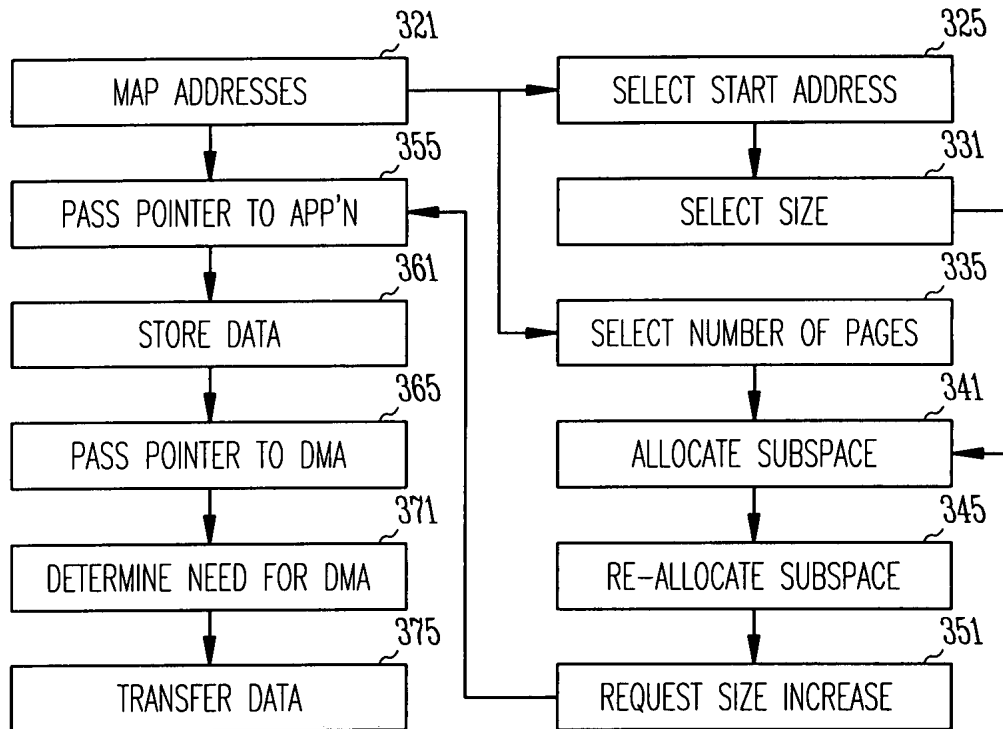


Fig. 3

4/4

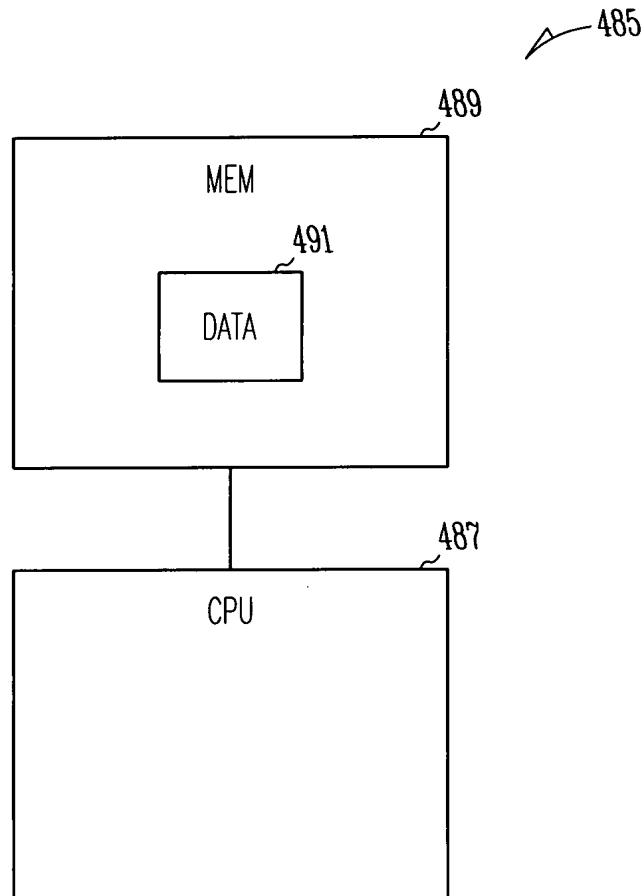


Fig. 4